

May 1819

No. 55

No.
2

An
Inaugural Essay.
on
Hæmoptysis.

Submitted to the examination
of the

Trustees and Medical
Professors of the

University of Pennsylvania,

For the degree of

Doctor of Medicine.

Theodore A. Cook

admitted March 20, 1819

cc. 1
and I think
it is
impossible
to do
anything else
but to
divide our work
into groups
accordingly.
I am
anxious to
see what
you think.

Preface

In obedience to that law of the University of Pennsylvania, which demands of those who become candidates for its honours in the department of Medicine, a Dissertation on some medical subject, I have written the following pages.

A consideration of my youth and inexperience, in conjunction with the liberality of those to whom the following Thesis is submitted, encourages me to expect their indulgence; and renders any apology for the imperfection of the following sheets superfluous. The subject I have chosen is Hemoptysis. This of itself being sometimes immediately a fatal disease and more frequently terminating in that deplorable scourge of mankind Pustules Pulmonalis, which so often consigns to an early tomb, those who had

que se ha de tener en cuenta
que el efecto de la fuerza
de la gravedad es que
se desplaza la materia
de un punto a otro.
que el efecto de la fuerza
de la gravedad es que
se desplaza la materia
de un punto a otro.
que el efecto de la fuerza
de la gravedad es que
se desplaza la materia
de un punto a otro.
que el efecto de la fuerza
de la gravedad es que
se desplaza la materia
de un punto a otro.

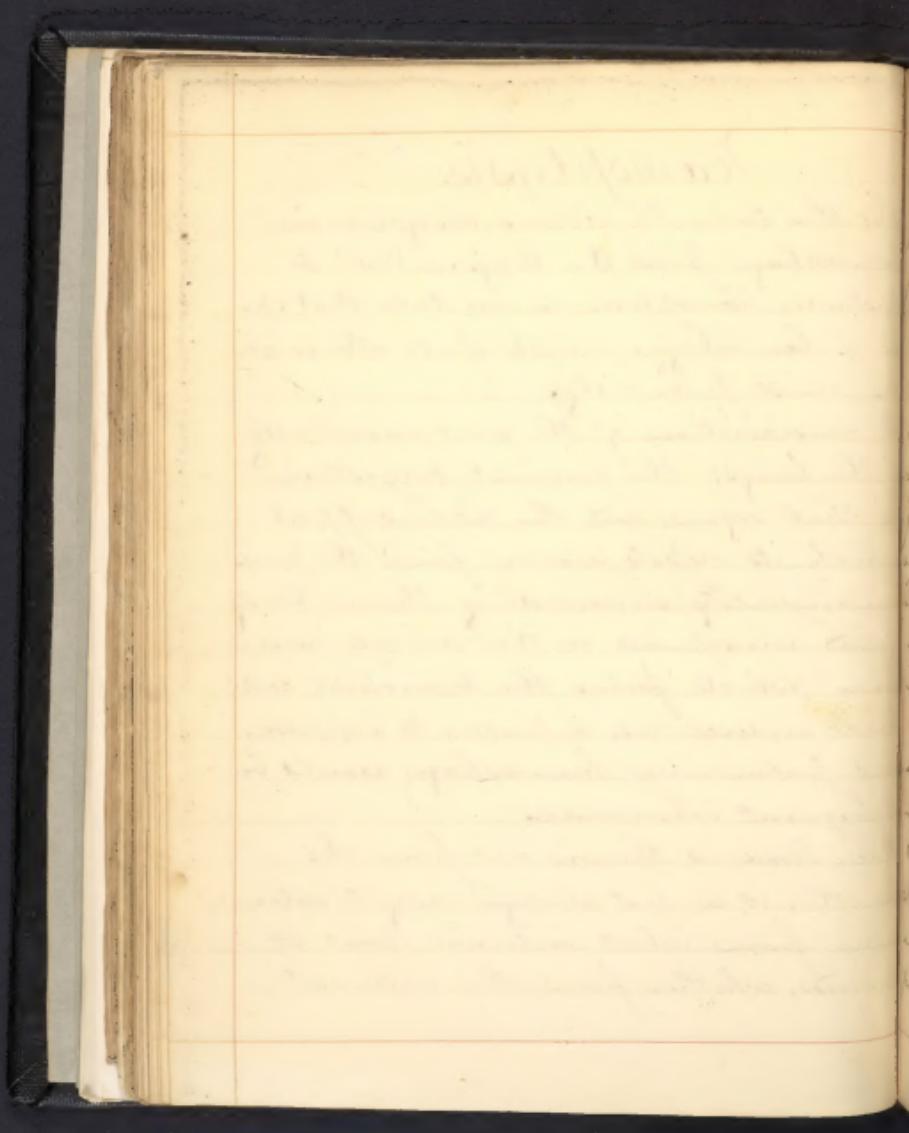
otherwise shone as stars in their respective spheres and shed usefulness around them, renders it a subject in my estimation of no small importance. In what I have written on the subject of homopathy I pretend to nothing original; indeed as it is a disease that seems pretty well understood, and therefore well suited to exercise the pen of youth and inexperience what I shall say will be little else than a detail of the experience of others.

Hemoptysis.

By this term, Physicians designate an hemorrhage from the lungs. Next to epistaxis, hemoptysis is said to be that species of hemorrhage, which of all others occurs most frequently.

A consideration of the great vascularity of the lungs; the frequent congestion of that organ; and the little support which its vessels receive from the parts immediately surrounding them, (being spread undivided on that delicate membrane which forms the bronchial cells) would induce us, a priori, to suppose that pulmonary hemorrhage would be of frequent occurrence.

When blood is thrown out from the mouth, it is not always easy to determine from what internal part it proceeds; whether from the internal



surface of the mouth itself; from the fauces or adjoining cavities of the nose; from the stomach, or the lungs; however when the blood is thrown out by coughing after some previous affection of the breast, there is little doubt that it comes from the lungs. Hemoptysis is often a hereditary disease, which implies a peculiar and faulty conformation, transmitted from ancestors to their offspring.

The causes, both predisposing and exciting, are various.

There are few forms of disease, which come under the cognizance of the Physician, in which the marks of predisposition, are more evidently perceptible, than in hemoptysis.

In some persons who have a narrow chest and prominent shoulders, a faulty proportion may be supposed to exist between

the first time I have seen a
large number of them gathered in one
place before. At the same time
I have seen a number of them in
the woods and in the fields.
The birds were very numerous
and were singing all day long.
I have seen a number of them in
the woods and in the fields.

the capacity of the pulmonary system
of conducting air, and that of the nervous sys-
tem; weak persons are frequently the
victims of homolysis.

Persons of a sanguine temperament, i.e.
slender, delicate, make who are predisposed
of nervous susceptibility and irritability, and
therefore of quick parts, and those who
have short necks are, are of a plethoric
habit, are more liable to be attacked
with pulmonary hemoptysis than those
of opposite character, we refer on to the
above particulars.

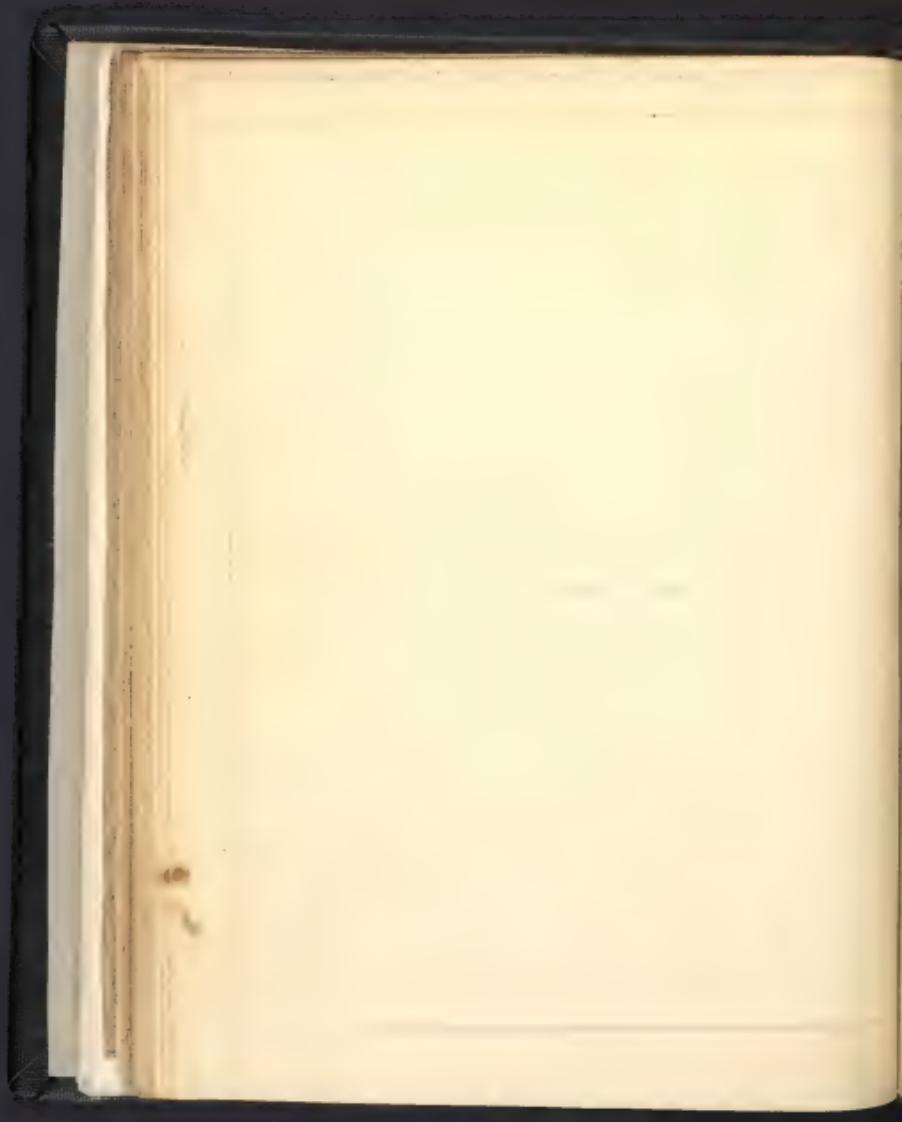
Those, who have been, formerly liable to
epistaxis; or who are occasionally subject to
the suppression of some accustomed dis-
charge, as the hemorrhoidal or in the female,
the catamenial; likewise those who have
suffered the amputation of any consider-
able limb, are predisposed to this disease.



Hæmorrhage most commonly occurs about
the age of puberty, & between the ages of
sixteen and thirty five but it may be
caused by external violence at any period
of life.

The exciting causes are various. The
most general of which are, external vio-
lence; violent exertion; as in lifting hea-
vy weights, jumping, the riding or driving
long continued and violent speaking, blow-
ing wind instruments, violent singing &c.
Intemperance in living and the excesses
of heat or cold may also act as exciting
causes.

It rarely occurs here also once, however
and this was first noticed by De Saussure
who ascended the Alps, and subsequently
continued by Baron Humboldt, who as-
cended the vast mountains of South Amer-
ica; De Saussure states, that hemorrhage



burst from the lungs after the slightest con-
tusion, when upon the top of the 4th rib.
There are various species of pulmonary hem-
orrhage, which are dangerous in proportion
to the cause which produces them.

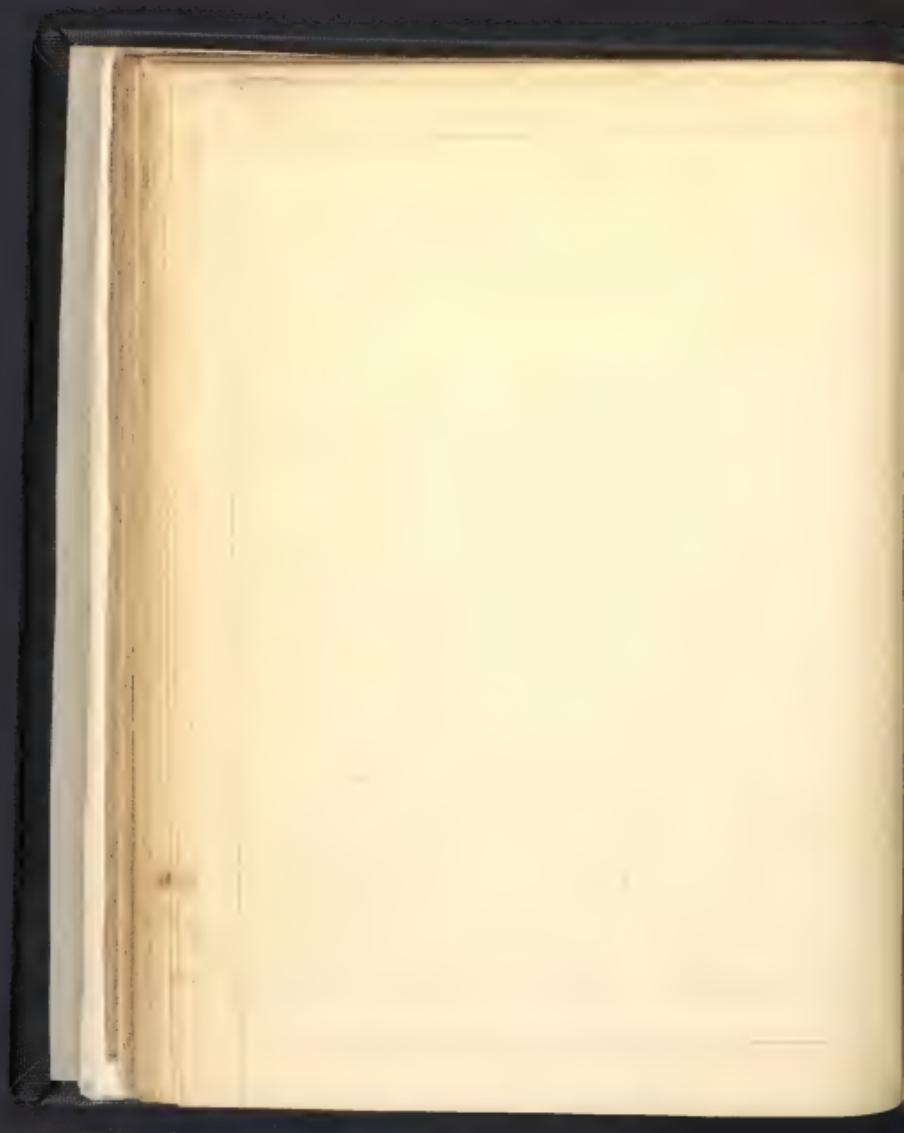
Hemorrhage may be produced by a mere
impulse of the vehicle or by violent inflam-
mation of the lungs, which often terminates
in pulmonary hemorrhage. The hemorrhage relieves
the lungs of the violence of inflammation.
It may be occasional as in sulphuric acid
or calomel, or it may arise from a
metastatic, as from infiltration of the lung
by disease, these seldom prove fatal except
when hemorrhage is profuse and of long con-
tinuance. Hemoptysis may arise from
hemorrhage generally, terminating pulmonary



Hypnotoma.

Hemoptysis is divided by Dr Cullen into acute and passive; in the former there is an increase of the arterial excitement, in the latter a decrease.

When the hemorrhage is from the lungs, the blood is shot up hotly, fluid, of a blood colour, and is brought up with more or less rushing, and precedes, generally, by a watery taste in the saliva, a sense of lassitude and sleepiness in the thorax, a degree of irritation at the top of the larynx, which causes a slight cough, also with a sense of heat under the sternum, pain in some part of the thorax and difficulty of respiration; though sometimes it is ushered in with shivering, coldness of the extremities, pain in the back and loins, flatulence, constipation and laxation. The pulse in the first stage is generally



frequent, such hæmorrhage, the blood
is generally brought up in small
quantities, but sometimes large from
the commencement out.

Diagnosis.

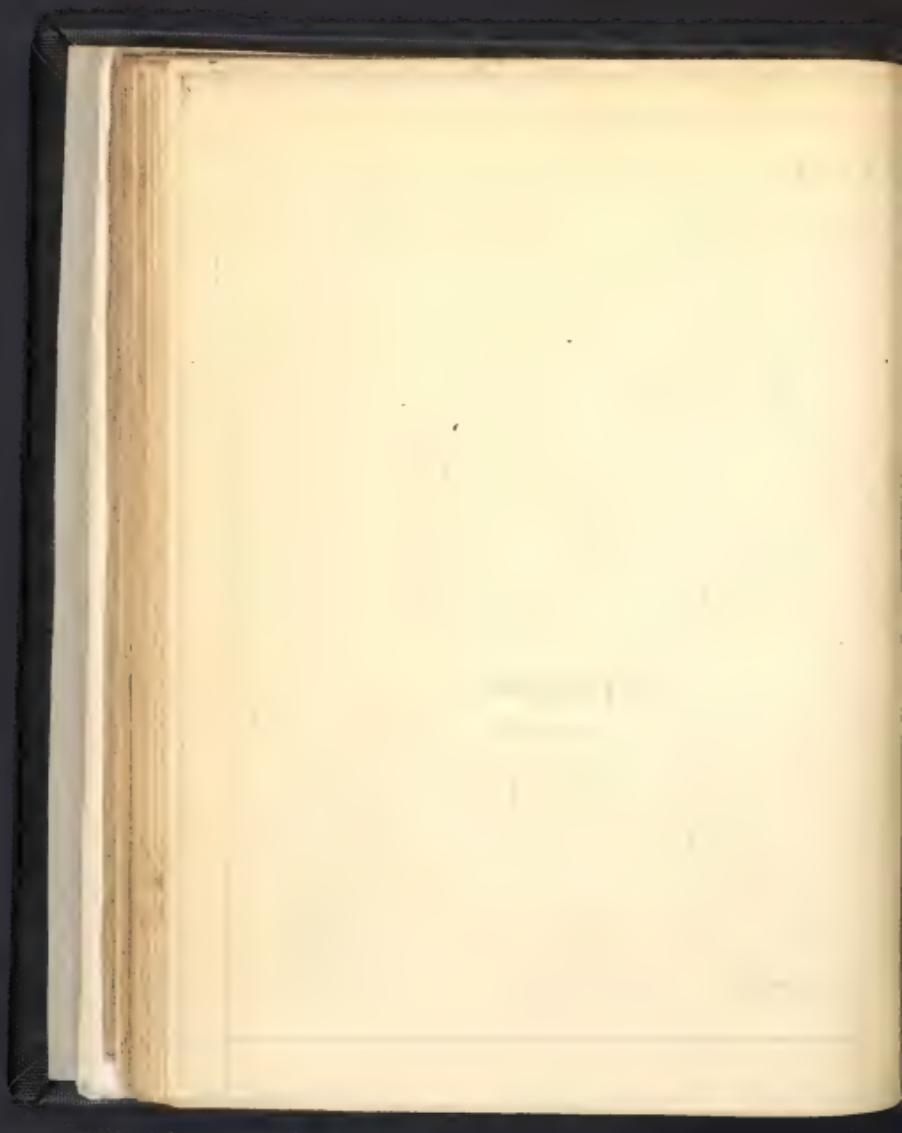
Hæmorrhage from the lungs is more
rare occurring than from the lungs;
it is rarely attended with fever and, genera-
lly, when inspection the source of the
blood becomes evident; the blood discharged
is rarely, if ever, of so dark a colour as
that proceeding immediately from the lungs.
In hæmatemesis the hæmorrhage is not
preceded or attended with any pulmonary
affection, no dyspnoea, cough &c; the blood is
brought up by vomiting, and is darker
coloured and greenish, generally larger
in quantity, and mixed with the other
contents of the stomach.



Hæmatoæsia is distinguished also by its being usually preceded by a sense of weight, pain or anxiety in the region of the stomach; the pulse likewise for the most part is much more reduced by a hemorrhage from the stomach than from the lungs; the pulse has been rendered almost imperceptable by a moderate hæmatoæsia, which is rarely the case in haemoptysis, except where the loss of blood has been very profuse, or the terror produced inordinately great.

Prognosis.

If the discharge be small, & if it be not the consequence of secondary fixed position; if it be neither preceded nor attended by pulmonary complaint, as aspergillosis, priapites &c if it appear in consequence of a rupture of a small vessel or follow pneumoniae inflammation, it may generate



be considered as a favourable case.

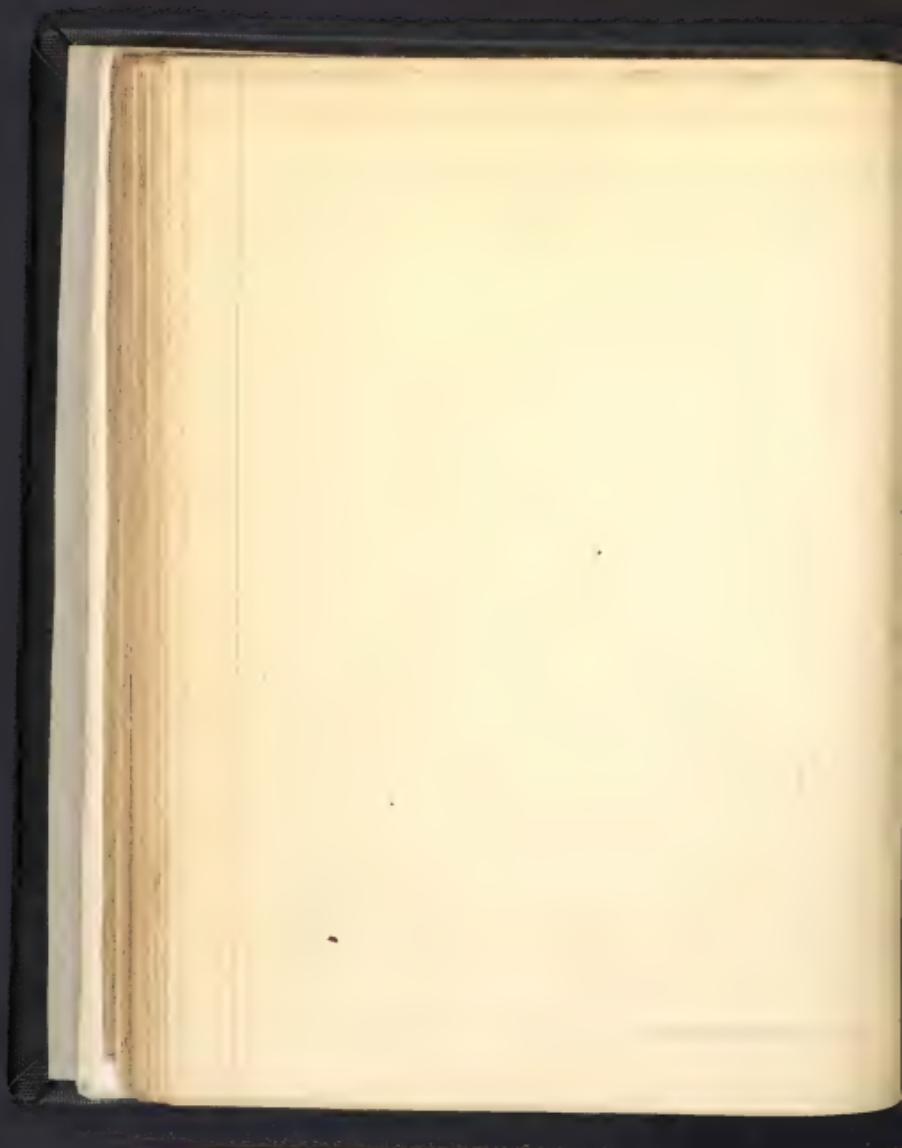
A contrary state of things is to be regarded as more unfavourable.

Treatment.

In the treatment of hemoptysis the practitioner will be influenced by the cause which produced it, as, well as in the general state of the system by which it is accompanied.

When called to a patient with hemoptysis attended with fever, heat, dry skin, sense of weight, oppression and some pain of the breast &c, we should distract blood in such quantity as to produce a diminution in the force of the arterial pulse.

In addition to bloodletting a general antiphlogistic regimen must be adopted; the patient must be kept completely at rest and have the room fresh.



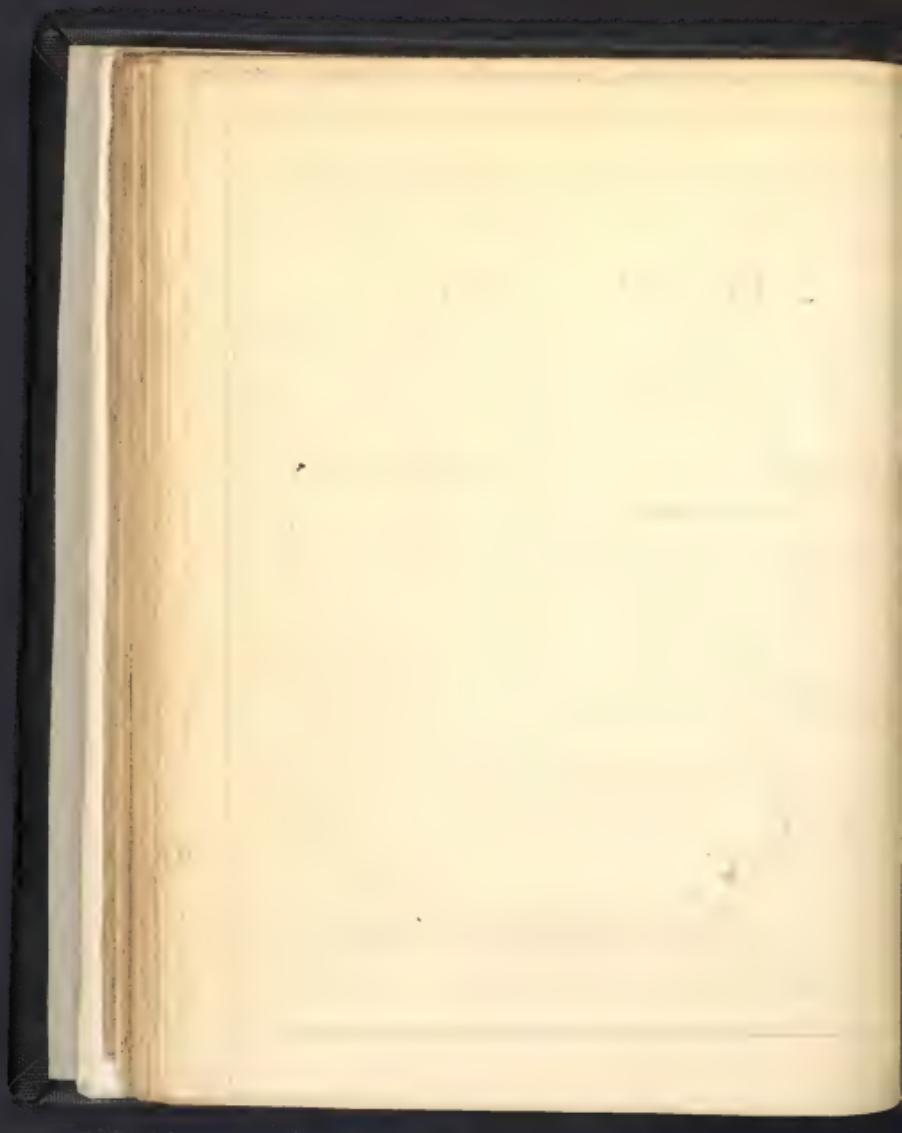
ventilated, he should avoid sweating and
the bowels should be kept in a soluble
state.

Muriate of Soda.

This may be given in doses of from $\frac{2}{3}$ to $\frac{3}{4}$ V;
it may be repeated every two hours or often
er; its effects are very prompt; Dr. Rush
employed it with success both in haem-
optysis and haematemesis, and in several
cases of slight haemoptysis, I have known
it wholly adequate in restraining the
hemorrhage; how it acts is not very
intelligible, but it is supposed the action
excited on the trachea and larynx, is ca-
lmed by sympathy to the lungs con-
trolling the vessels and staying the
hemorrhage.

Cold applications.

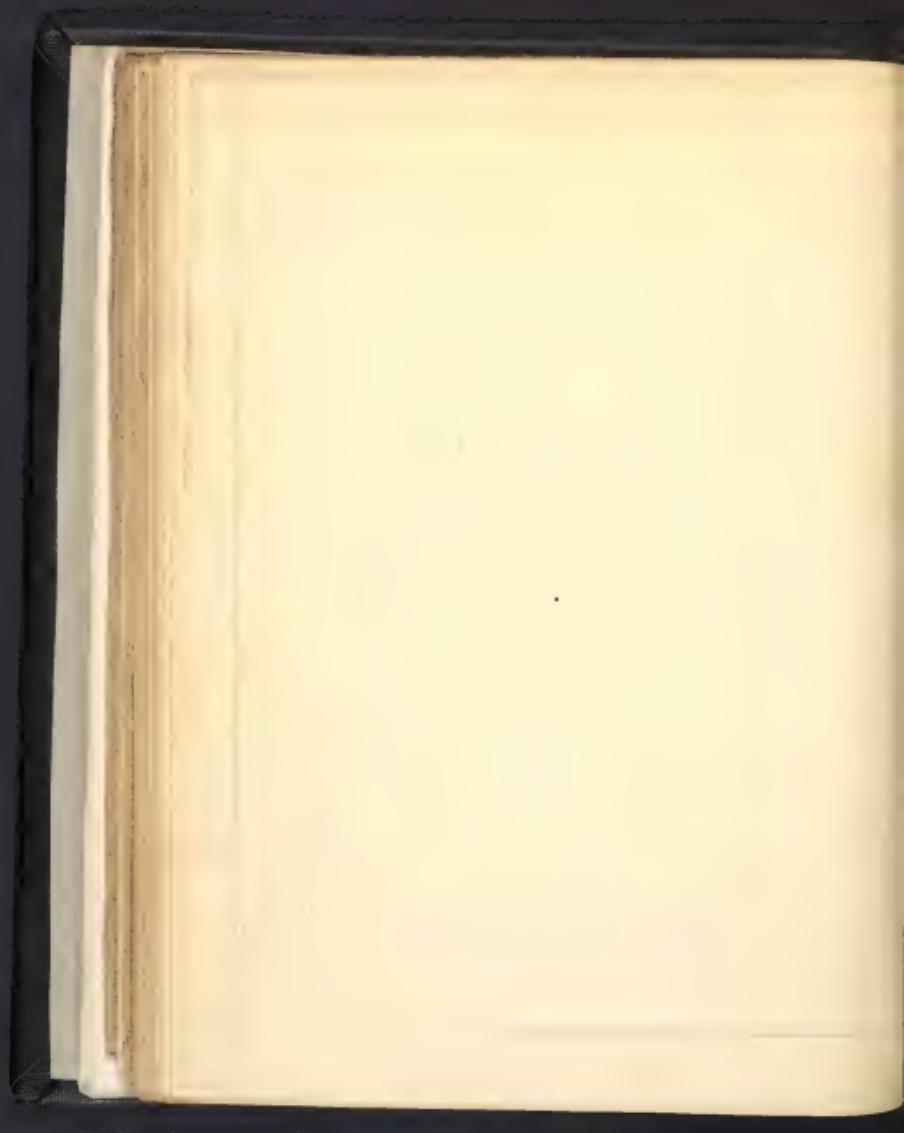
Cold applied to the scrotum or axillæ,



has had a very good effect in restraining hemorrhage. It was suggested by Larivière, and since recommended by others, to wash the whole body up in a sheet made wet with cold water or vinegar and water.

Saccharum Saturnis

This was recommended by some of the old practitioners; it was condemned by Cullen and others on account of the toxicity of the practice. The merit of reducing this medicine into practice is due to the late Dr Burton, who approved and highly recommended it; it may be given in doses of 3 and 5 grains combined with opium in moderation, the proportions of two grains of the saccharum saturni to half grain of opium. Professor Chapman gave a series of the



Trochaeus dilutus; and even a drachm
has been given without any dangerous
consequences. It affords sufficient to restrain
slight haemorrhages, but does not
appear fully adequate to arrest violent
and profuse hemorrhage, as in a very
violent case of haemoptysis, Dr Chapman
gave a scutellum without stopping
the flow of blood.

Paracotias.

Ligustrum. This willow has been highly
recommended, from its power of diminish-
ing arterial action. It is con-
sidered and well sometimes preferable name-
ning; it appears best adapted to slight
discharges of blood attended with pain in
the breast or seat and great irritability of
sustentatio —

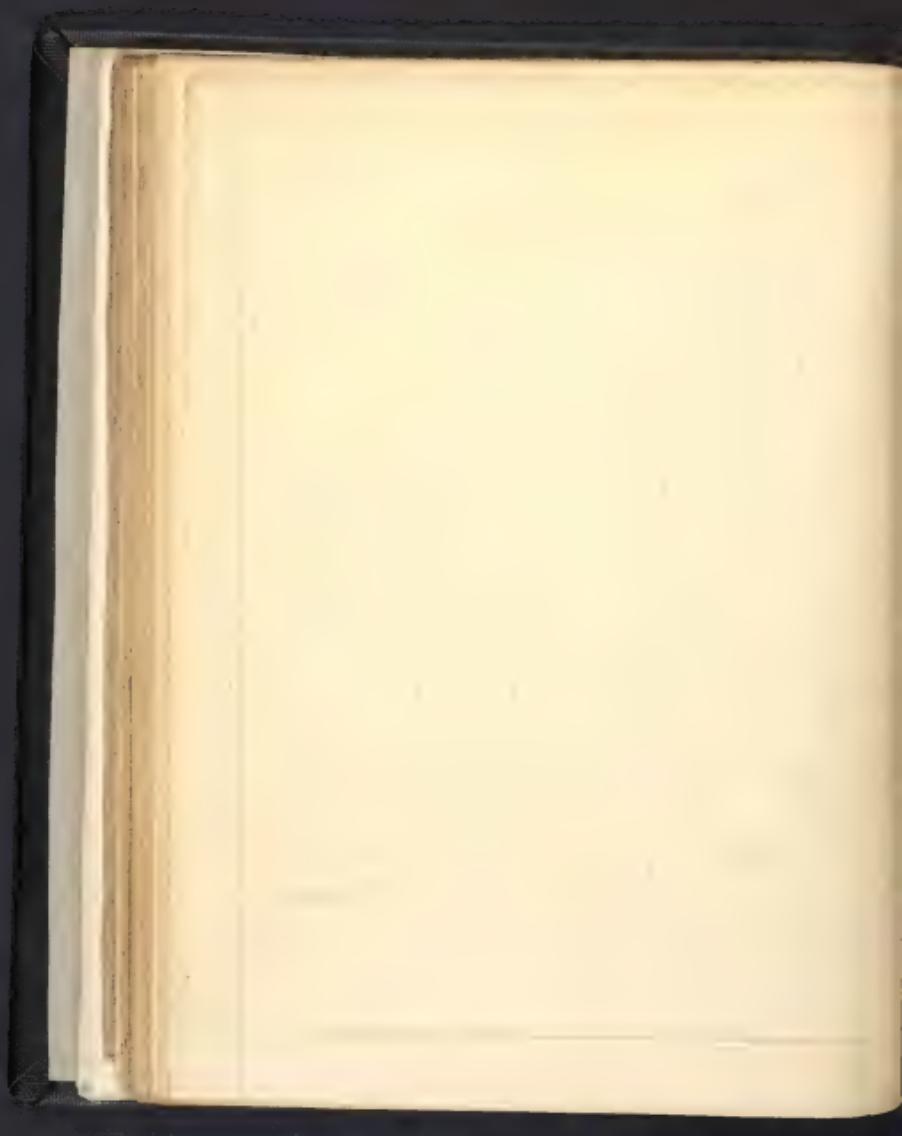


Hijoscyamus.

This medicine, it is said, in different
preparations, has been used successfully
by the German physicians.

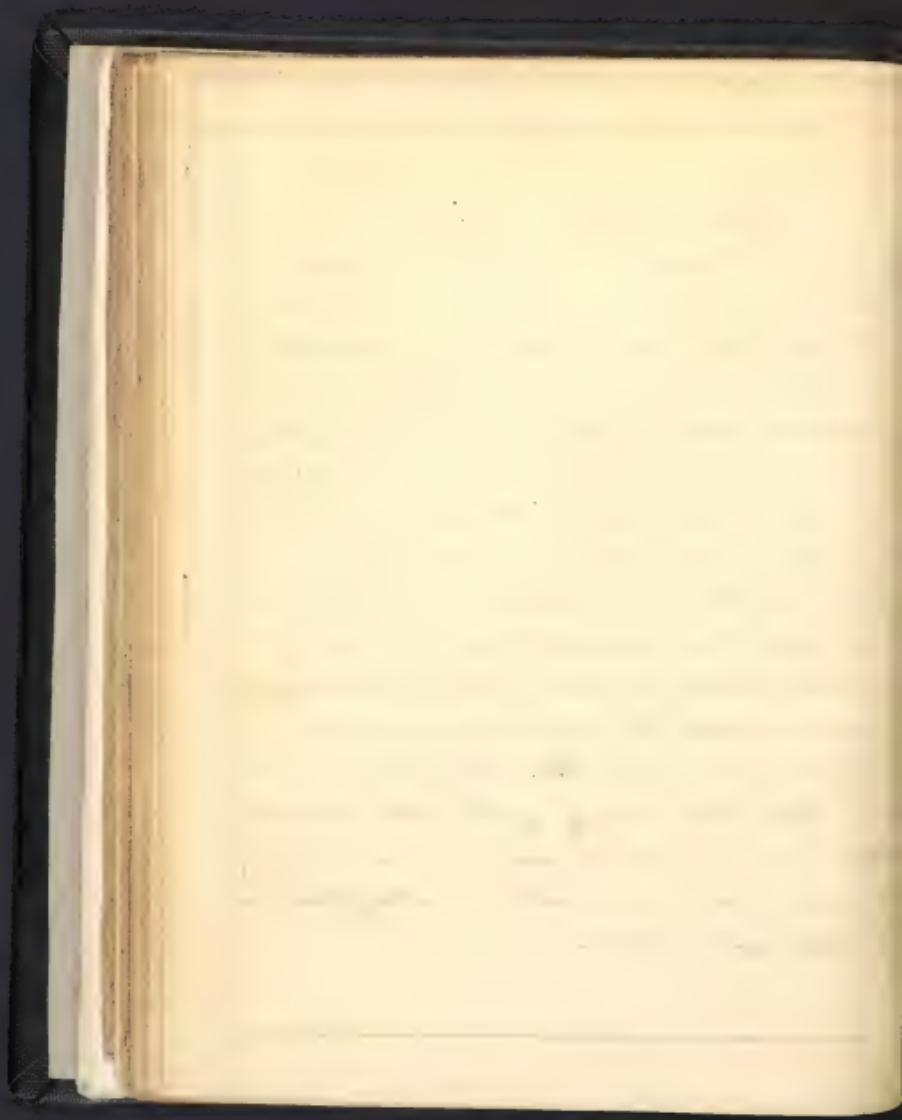
Opium.

Opium, as being a stimulant, would seem
to be proscriptive in colic, or tonic, however
rarely at least. Yet in those cases of pain
whence which are unattended by fever,
but where there is enough which seems
to have the effect of agitating the disease,
opium has been administered with
advantages; it allays the pain, gives general
irritation and restlessness of the patient,
and in this way has been efficacious in
putting a stop to the flow of blood, espe-
cially where it depended on exertion over-
come by coughing.



Cometics.

In the authority of Biggs Robinson, emetics have been considerably used, although haemoptysis has been checked by short-continued vomiting. (In Chairman was a violent case of haemoptysis supposed by a dose of digitalis which vomited) Yet emetics do not appear to be popular in the United States they should not be indulged in the commencement of fevers excited, except in small and frequently re-heated doses, so as to keep up circulation, in such cases the carbonized antimony is said to be serviceable. The nitrolic solution has had a very good effect in stopping haemoptysis, given in small doses, its effect is great, probably owing to the astringent nitrate.



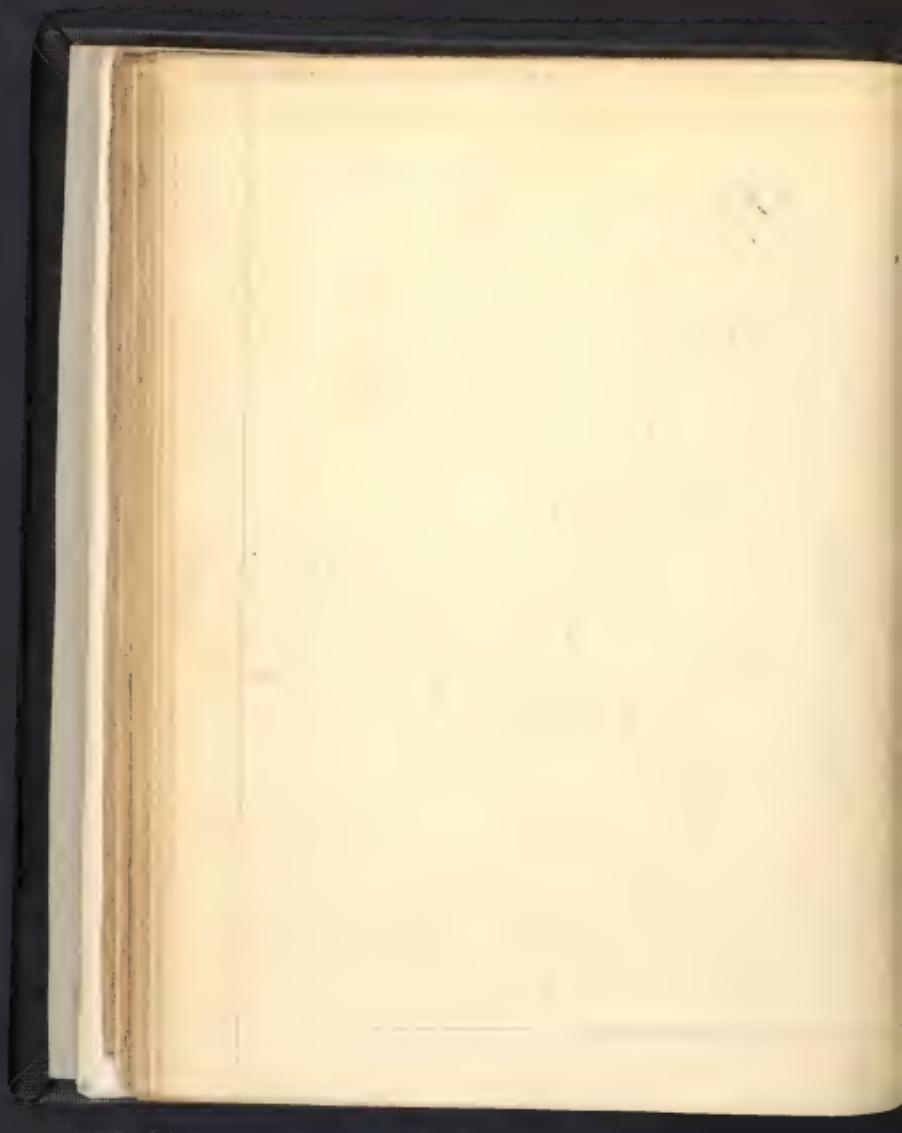
Specularia.

This, in combination with alum, is
referred to Dr Chapman; he gives two
grains of Specularia and half grain of opium
in every two hours so as to keep up
a considerable degree of sneezing.

Cold Waters.

These are important in haemoptysis.
They have been known to check it when
all other means had failed. They should
be applied to the chest, though some ad-
vise those applied to the neck, a third to
the extremities.

The neutral salts have been recommended
and nitrate of potash is often as consider-
able number. Dr Colcock recommends nine
or ten grains ^{as} combined with two or three of a grain
of tartarized antimony, and in a case



of haemoptysis where the patient had febrile symptoms, I gave it as an auxiliary to the lancet with very happy effect.

Passive Haemorrhage.

In this we must resort to tonics, Peruvian bark united with calyculates have been recommended; vegetable astringents have been used as hinc &c. The mineral acids are occasionally resorted to; of these the sulphuric is generally preferred, except in cases connected with scrophulous swellings where the nitric is much to be preferred. Malt liquors appear to exercise some influence over haemoptysis; of these porter is preferable, as it is a liquid generally well retained by the stomach.

In conjunction with these remedies the patient should take a light nourishing diet, and use gentle exercise.

And to avoid a recurrence of the disease
it is requisite to avoid all the exciting
causes as excesses in eating,
drinking and exercise, avoid taking cold
which by bringing on inflammation would
cause a recurrence, and remove as
soon as possible any arteritis or febrile
diathesis by ^{the} lancet, diet and complete rest.

Nov
16

and you will be surprised at
the number of them. I have
not quite determined what you
are to do with them. We probably go to
the market and sell them. I am
not certain yet. I hope to
have a good price for them.